

Work Order ID 148559

Tuesday, July 05, 2016 3:06:13 PM

646-3810
B148559
REV. N/C

148559

Page 1

Item ID: 646.3810

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Bracket

Start Date: 6/22/2016 Start Qty: 5.00 *5*

Cust Item ID:

Required Date: 7/14/2016 Req'd Qty: 5.00 *5*

Customer:

Reference:

Approvals: Process Plan: DAS 21 9-89 Date: JUL 12 2016 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
646.3800	N/C

110

110

Mill Conv

Conventional Milling Machine

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per DWG
DWG REV: N/C

2- deburr and break all sharp edges

0.00

0.17

S Ø DAS 32 9-89 16-07-28

120

120

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.01

S Ø DAS 32 9-89 16-07-28

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : _____			
Misidentified ☐	☐	Past Due ☐	☐				

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Work Order ID 148559

Tuesday, July 05, 2016 3:06:13 PM

148559

Page 3

Item ID: 646.3810

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Bracket

Start Date: 6/22/2016 Start Qty: 5.00

5

Cust Item ID:

Required Date: 7/14/2016 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
155	QC5- Inspect part completeness to step on W/O	0.00							
155									
QC	Memo	0.02							
Quality Control									DAS 38 9-89 AUG 26 2016
180	Identify as per dwg & Stock Location: <u>CCT105</u>	0.00							
180									
Packaging	Memo	0.01							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								
									5 AUG 26 2016 DAS 6 9-89
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.08							
Quality Control									
									BPA AUG 29 2016 DAS 21 9-89 AUG 26 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Tuesday, July 05, 2016 3:06:12 PM

Page 1

Work Order ID: 148559

148559

Parent Item: 646.3810

646 3810

Parent Item Name: Bracket

Start Date: 6/22/2016

Required Date: 7/14/2016

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A NEW ISSUE 12-10-22 JLM VERIFIED:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6A1.00X0.75X 0.125X0.060		Purchased	No			110	f	19.1191	0.1375	0.6875			

***M7075T6A1 00X0 75X0 125X0**

16-07-28

DAS
32
9-89

7075T6 ANGLE 1.0" X .75" X .125" X .060"W

Location

Loc Qty

Loc Code

MAT051

19.1191

123947

19.1191

1.547'

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
0010 SC 08.0				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

FIRST ARTICLE INSPECTION CHECKLIST

Measured by: 32 Date: 16-07-28		Audited by: D. O Date: 16/07/28		Preliminary Approval: Date:	
Rev	Date	Change	Revised by		Approved
A	14.06.25	New Issue	KJ		

APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 03697

SHEET 1 OF 1

DWG NO. 646.3800

REV: N/C

PREPARED
BY B. PETERS

DATE: 11/14/12

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: BRACKETS

APPROVED BY:

ENGR

MFG

QC

EFF: NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON:

ADDED ALTERNATE MATERIAL.

ECR:

D-12-006

IS

1 PRIMARY MATERIAL: 7075-T651 ALUMINUM PER AMS-QQ-A-250/12.
ALTERNATE MATERIAL: 7075-T6511 ALUMINUM PER AMS-QQ-A-200/11.

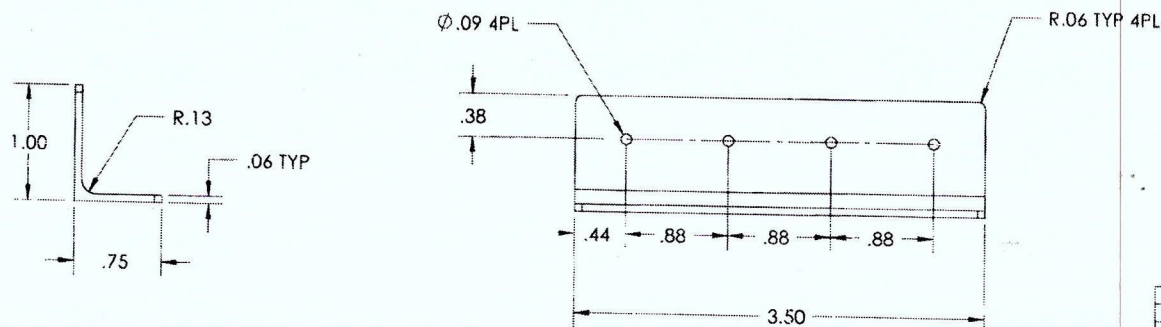
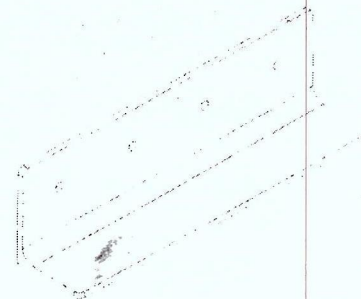
SHEET 1, ZONE A2 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 148559 MJS

16-07-12

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				CHANGE CATEGORY		
☐ RFMS ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM				☐ MAJOR ☒ MINOR		
				DER REVIEW REQUIRED		
				☐ YES ☒ NO		

- ① MATERIAL: ALUMINUM 7075-T651 AMS-QQ-A-250/12
- ② FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377 J TYPE I CLASS N
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120



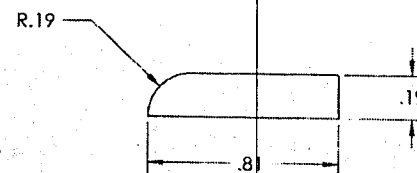
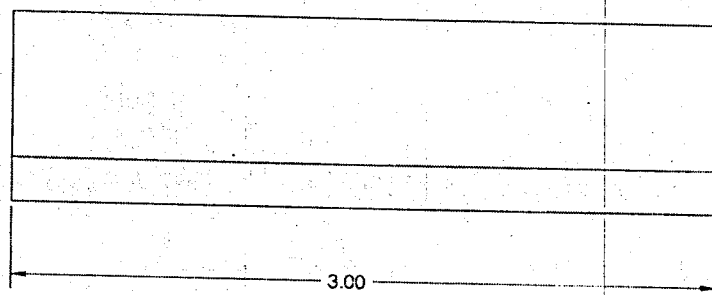
UNINCORPORATED (cont.)

03697

[illegible]

THE INFORMATION CONTAINED HEREIN IS THE SOLE PROPERTY OF APICAL INDUSTRIES AND REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED

REV	DESCRIPTION	DATE	APPROVED



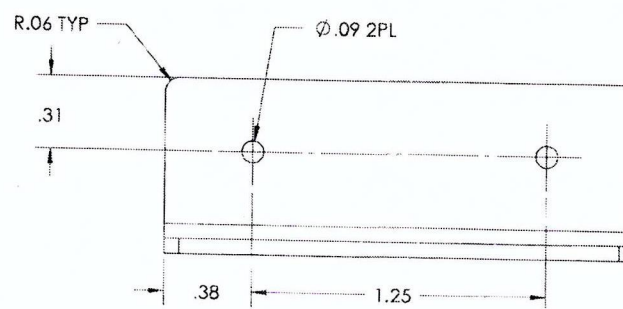
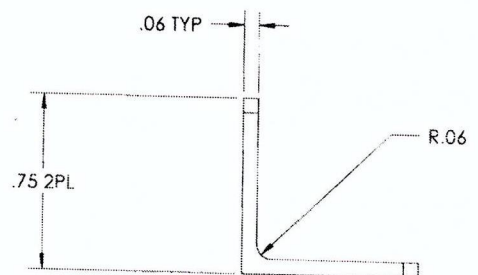
646.3811

NEXT ASSY IS:		ORIGINAL DATE: 05-10-08		APICAL INDUSTRIES	
DRAWN BY: C. RYAN		CHECKED BY: C. RYAN		2408 TEMPLE HEIGHTS DR.	
DRAWING APPROVAL:		DATE: 07/26/08		OCEANSIDE, CA. 92058-3512 (760)724-5300	
CONTRACT NO:		SCALE: N/A		BRACKETS	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		DWG NO: 646.3800		P/N: N/C	
DIMENSIONS ARE IN INCHES		SHEET: 2 OF 5			

THE INFORMATION CONTAINED IN THIS REPORT IS UNCLASSIFIED
EXCEPT WHERE SHOWN OTHERWISE BY THE MARKS HEREON
THE WRITER ASSUMES NO LIABILITY FOR ANY ERRORS OR OMISSIONS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

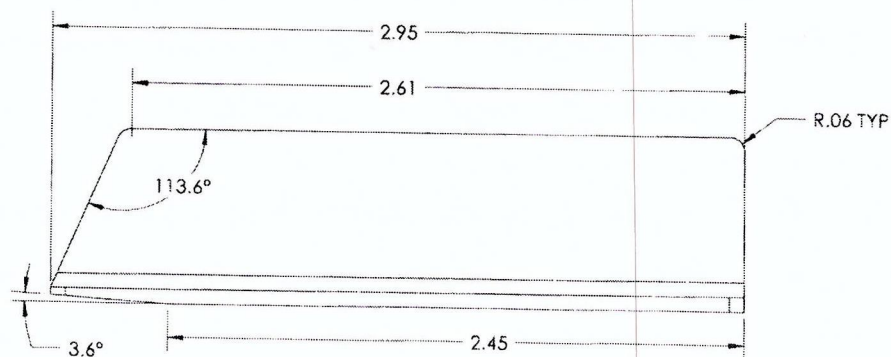
646.3812



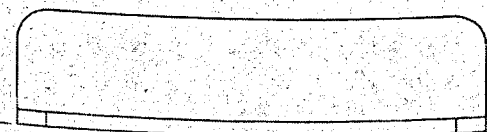
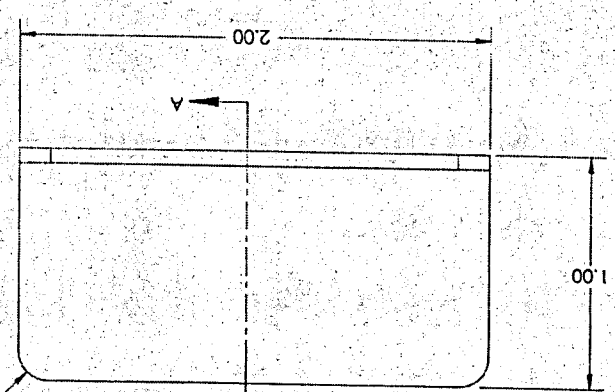
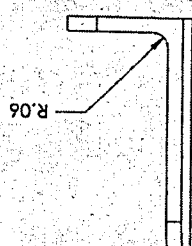
INSTR. ASSY (S)	OFFICIAL DATE	04-19-98	APICAL INDUSTRIES
	ISSUED BY	PHIL KIP	
	ISSUED TO		2608 TEMPLE HEIGHTS DR.
	CONTRACT NO.		CICANSO, CA 92006-3512 (760) 724-5700
	CONTRACTOR		BRACKETS
	PROJECT NAME		
	PROJECT ADDRESS		
	PROJECT PHONE		
	PROJECT FAX		
	PROJECT E-MAIL		
	PROJECT WEBSITE		
	PROJECT COMMENTS		
	PROJECT NOTES		
	PROJECT DRAWING		
	PROJECT SPECIFICATIONS		
	PROJECT MATERIALS		
	PROJECT EQUIPMENT		
	PROJECT TOOLS		
	PROJECT SUPPLIES		
	PROJECT LABOR		
	PROJECT COSTS		
	PROJECT BUDGET		
	PROJECT SCHEDULE		
	PROJECT RISK		
	PROJECT STATUS		
	PROJECT COMMENTS		
	PROJECT NOTES		
	PROJECT DRAWING		
	PROJECT SPECIFICATIONS		
	PROJECT MATERIALS		
	PROJECT EQUIPMENT		
	PROJECT TOOLS		
	PROJECT SUPPL		

[illegible]

Technical drawing of a mechanical part with dimensions: .06 TYP, .75, R.06, .03, .63.

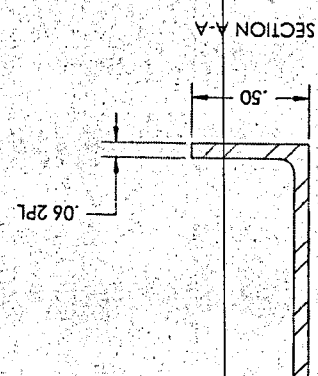
[illegible]

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED
DATE 08-19-2010 BY 60322 UCBAW/SJS



R13.0

R.13 4PL



SECTION A-A

646.3814

[illegible][illegible]



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 912152

Date: 25-Aug-16

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
5 ea	Part: 646.3810 Bracket Job: 19960	Rev: NC PO: PO33355 Line: 8	
14 ea	Part: D5312-1 Tie Down Job: 19961	Rev: A PO: PO33355 Line: 9	
DATE: <u>25/8/16</u>			
CERTIFIED SIGNATURE: <u>[Signature]</u>			
RECEIVER SIGNATURE: _____			
Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
CERTIFICATE OF CONFORMANCE			
A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT CONFORM TO REQUIREMENTS.			
MADE IN CANADA.			



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO33355**

Purchase Order Date 8/17/2016

PO Print Date 8/25/2016

Page Number 3 of 5

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

VENDOR'S TRUCK

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

FCA - (Free Carrier)

Line Total: \$31.25

7 148258

646.3811 RADIUS
BLOCK REV. N/C

8/25/2016

10.00

\$6.55

\$65.50

Yes

8/25/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total: \$65.50

8 148559

646.3810 BRACKET
REV. N/C

8/25/2016

5.00

\$6.55

\$32.75

Yes

8/25/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total: \$32.75

9 147963

D5312-1 TIE DOWN
REV.A

8/25/2016

14.00

\$8.93

\$125.02

Yes

8/25/2016

FINISH: BLACK ANODIZE PER MIL-AA-8625F TYPE I/II/III, CLASS 2

8/26/16
SP

Note:

8/25/2016